

IFN- α 2 (NYRhIFN- α): sc-73305

BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN- α genes (one of which is IFN- α 2), 1 IFN- β gene, 1 IFN- ω (also known as IFN- α 1) gene and a number of IFN- ω pseudogenes, are clustered on human chromosome 9. IFN- α and - β are cytokines that are widely known to induce potent antiviral activity. They exert a variety of other biological effects, including antitumor and immunomodulatory activities and are increasingly used clinically to treat a range of malignancies, myelodysplasias and autoimmune diseases. IFN- ω is antigenically different from human IFN- α , IFN- β or IFN- γ , but is a component of natural mixtures of IFN species produced by virus-induced leukocytes or Burkitt's lymphoma cells. The type I interferon receptor (IFN- α R) interacts with IFN- α , IFN- β and IFN- ω , and seems to be a multisubunit receptor.

REFERENCES

1. Adolf, G.R. 1987. Antigenic structure of human interferon- ω 1 (interferon- α 1): comparison with other human interferons. *J. Gen. Virol.* 68: 1669-1676.
2. Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine α -interferon receptors. *FEBS Lett.* 350: 281-286.
3. Hussain, M., et al. 1996. Identification of interferon- α 7, - α 14 and - α 21 variants in the genome of a large human population. *J. Interferon Cytokine Res.* 16: 853-859.
4. Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons- α , - β and - ω . *J. Immunol. Methods* 195: 55-61.
5. Cutrone, E.C., et al. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. *FEBS Lett.* 404: 197-202.
6. Rozera, C., et al. 1999. Interferon (IFN)- β gene transfer into TS/A adenocarcinoma cells and comparison with IFN- α : differential effect on tumorigenicity and host response. *Am. J. Pathol.* 154: 1211-1222.
7. Barthe, C., et al. 2001. Expression of interferon- α (IFN- α) receptor 2c at diagnosis is associated with cytogenetic response in IFN- α -treated chronic myeloid leukemia. *Blood* 97: 3568-3573.
8. Eriksen, K.W., et al. 2004. Biphasic effect of interferon (IFN)- α : IFN- α up and downregulates interleukin-4 signaling in human T cells. *J. Biol. Chem.* 279: 169-176.
9. Suyama, T., et al. 2005. Upregulation of the interferon γ (IFN- γ)-inducible chemokines IFN-inducible T cell chemoattractant and monokine induced by IFN- γ and of their receptor CXCR3 in human renal cell carcinoma. *Cancer* 103: 258-267.

CHROMOSOMAL LOCATION

Genetic locus: IFNA2 (human) mapping to 9p21.3.

SOURCE

IFN- α 2 (NYRhIFN- α) is a mouse monoclonal antibody raised against recombinant IFN- α 2 of human origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

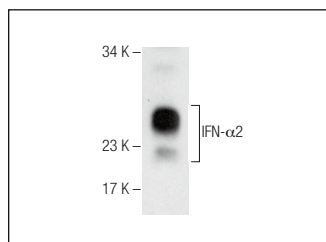
IFN- α 2 (NYRhIFN- α) is recommended for detection of IFN- α 2a and b of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFN- α 2 siRNA (h): sc-63324, IFN- α 2 shRNA Plasmid (h): sc-63324-SH and IFN- α 2 shRNA (h) Lentiviral Particles: sc-63324-V.

Molecular Weight of IFN- α : 19 kDa.

Positive Controls: U-937 cell lysate: sc-2239.

DATA



IFN- α 2 (NYRhIFN- α): sc-73305. Western blot analysis of IFN- α 2 expression in U-937 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Wu, L., et al. 2014. Tuning cell autophagy by diversifying carbon nanotube surface chemistry. *ACS Nano* 8: 2087-2099.
2. Chronopoulou, S., et al. 2023. Expression and purification of human interferon α 2a (IFN α 2a) in the methylotrophic yeast *Pichia pastoris*. *Protein Expr. Purif.* 211: 106339.
3. Zhai, G., et al. 2024. A fusion protein approach to integrate antiviral and anti-inflammatory activities for developing new therapeutics against influenza A virus infection. *Antiviral Res.* 228: 105924.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.